

Fragment genomic DNA and gel purify to average size of 0.5-3 kbp

Ligate into plasmid to get Genomic Library [pTAGL]

Transform into DH5α[pTAGL]

Heterogeneous Selective Growth of overexpression library

Early time point in selective conditions

Selection for cells bearing gene inserts providing growth advantage

Purify plasmids from time points throughout growth in selective conditions

Fragment plasmids and label with fluorescent nucleotide

Use DNA micro-array to identify genes that provided an advantage or disadvantage throughout selective growth.

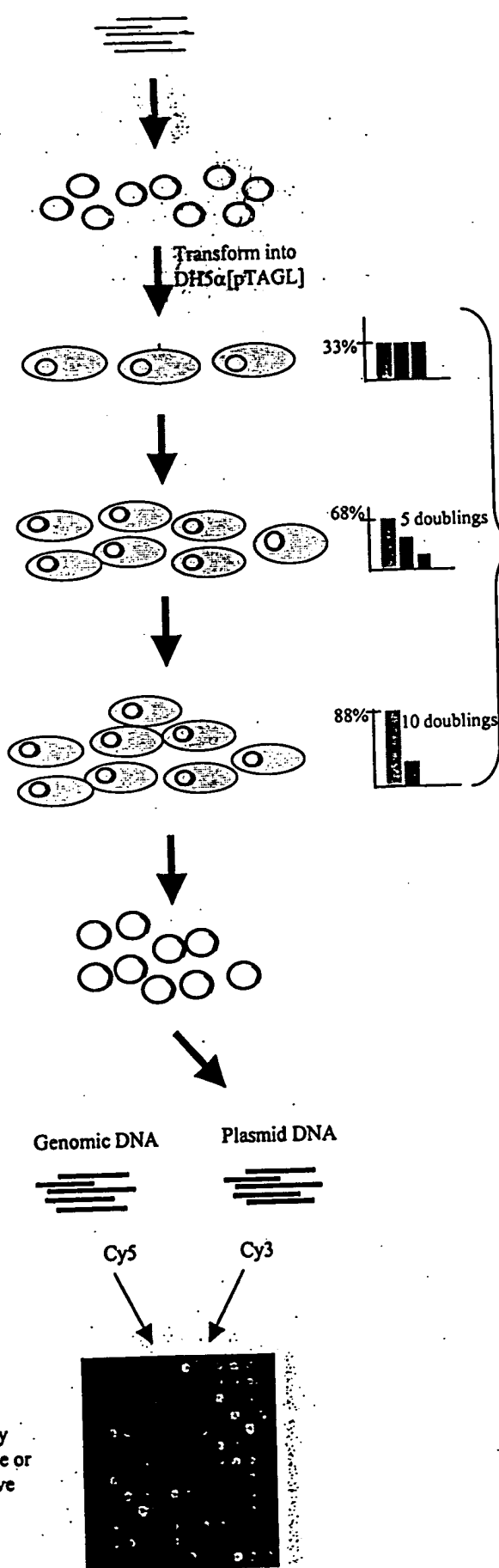
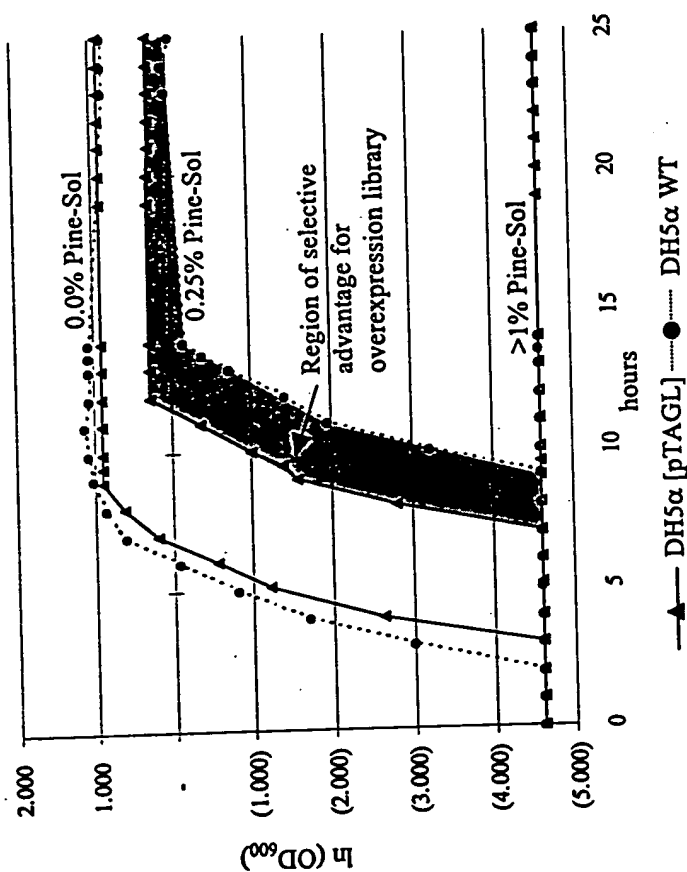


Figure 1



% Pine-Sol	$\Delta OD_{600}^{1,2}$	$\Delta \text{Lag Time (hrs)}^{1,3}$
0.0	12.7%	-0.05
0.1	13.7%	-0.15
0.25	-26.7%	2.96
0.4	-42.8%	1.91

<sup>1</sup> The difference DH5α - DH5α[pTAGL] for final OD<sub>600</sub> or lag time. All values are averages of repeat measurements. The SD was 10% of the average for the final OD<sub>600</sub> readings and 6% of the average for the lag time. <sup>2</sup> The average OD<sub>600</sub> throughout stationary phase. <sup>3</sup> The time required to reach an OD<sub>600</sub> = 0.10

Figure 2

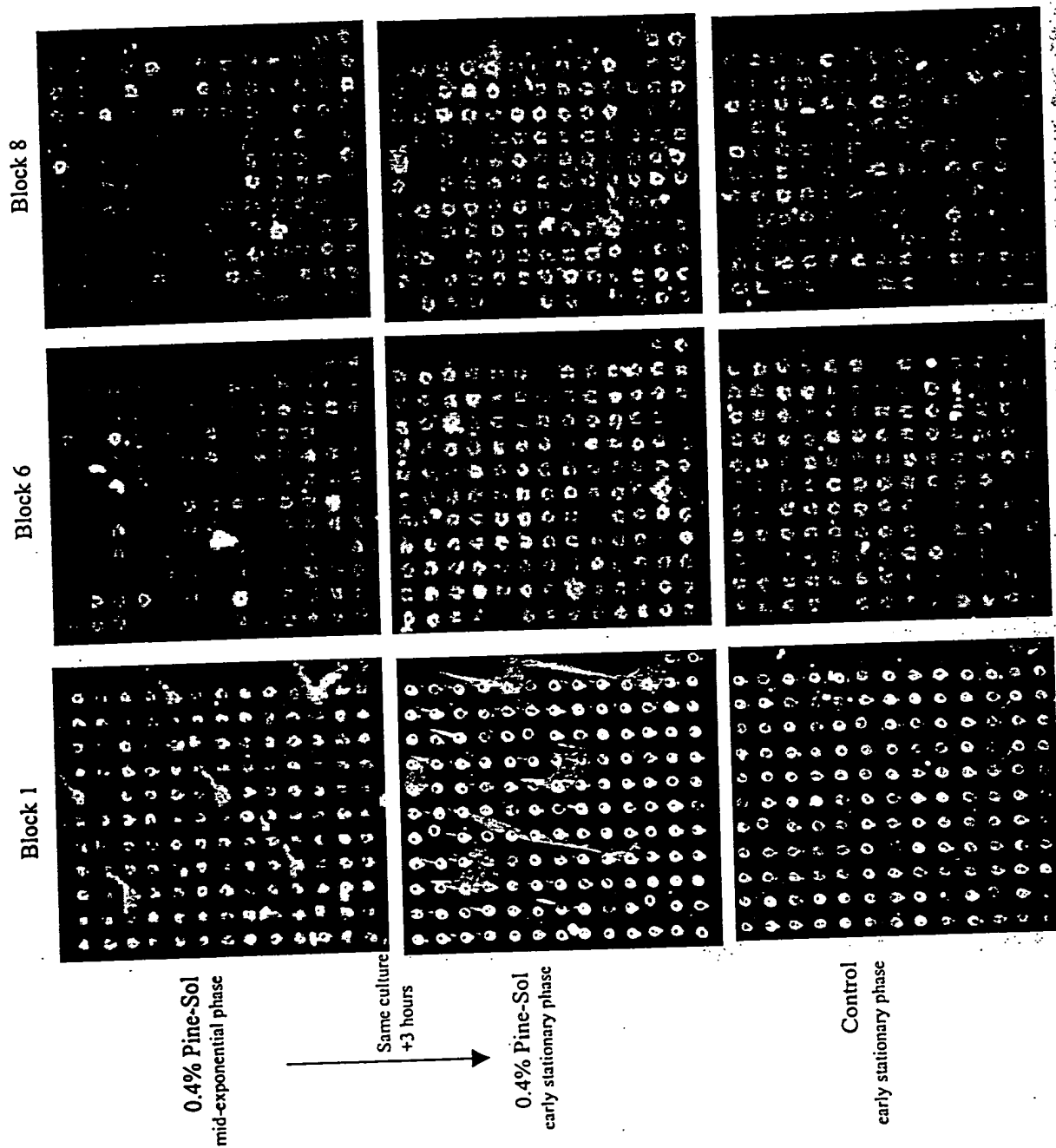


Figure 3

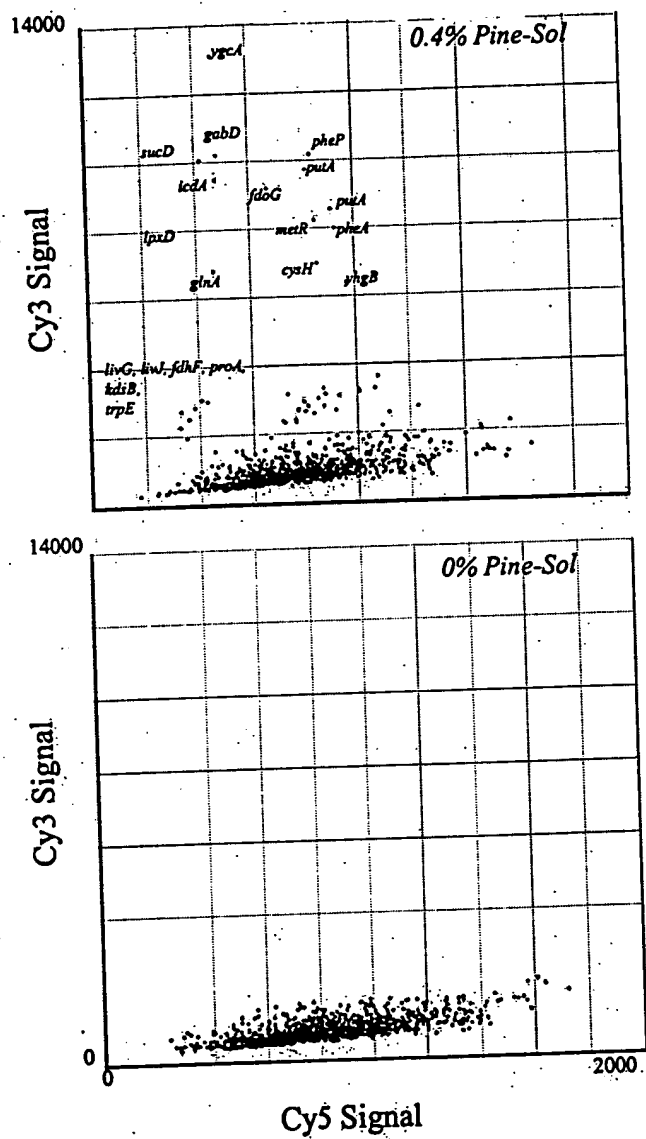


Figure 4